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8. (Amended twice) A fusion protein, comprising a nucleotide binding domain operatively linked to a ligand binding domain derived from an intracellular receptor, wherein:

the nucleotide binding domain is a polydactyl zinc-finger peptide or modular portion thereof that specifically interacts with a contiguous nucleotide sequence of at least about 3 nucleotides;

the zinc-finger peptide is comprised of modular units from a C2H2 zinc-finger peptide that specifically interacts with a sequence of nucleotides and targets the fusion protein to an exogenous or endogenous gene that comprises the sequence of nucleotides; and

the fusion protein is a ligand activated transcriptional regulator.

13. The fusion protein of claim 3, wherein the hormone receptor is a progesterone receptor variant or an estrogen receptor variant, wherein a receptor variant comprises a ligand binding domain that has selectivity and sensitivity for endogenous and exogenous ligands that differ from its native ligands.

20. (Amended) A fusion protein, comprising a nucleotide binding domain operatively linked to a transcription regulating domain and a ligand binding domain derived from an intracellular receptor, wherein:

the nucleotide binding domain is a polydactyl zinc-finger peptide or modular portion thereof that specifically interacts with a contiguous nucleotide sequence of at least about 3 nucleotides;

the transcription regulating domain comprises a transcription repression domain; and

the fusion protein is a ligand activated transcriptional regulator.

22. (Amended) A fusion protein, comprising a nucleotide binding domain operatively linked to a transcription regulating domain and a ligand binding domain derived from an intracellular receptor, wherein

the nucleotide binding domain is a polydactyl zinc-finger peptide or modular portion thereof that specifically interacts with a contiguous nucleotide sequence of at least about 3 nucleotides;

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the fusion protein is a ligand activated transcriptional regulator; and the fusion protein is encoded by the sequence of nucleotides set forth in any of SEQ ID Nos. 1-18.

25. (Amended twice) A nucleic acid molecule, comprising a sequence of nucleotides encoding a fusion protein, wherein:

the fusion protein comprises a nucleotide binding domain operatively linked to a ligand binding domain derived from an intracellular receptor, wherein the nucleotide binding domain is a polydactyl zinc-finger peptide or modular portion thereof that specifically interacts with a contiguous nucleotide sequence of at least about 3 nucleotides;

the fusion protein is a ligand activated transcriptional regulator; and

the fusion protein is encoded by a sequence of nucleotides set forth in any of SEQ ID Nos. 1-18.

32. (Amended) A viral vector comprising a sequence of nucleotides encoding a fusion protein, wherein:

the fusion protein comprises a nucleotide binding domain operatively linked to a ligand binding domain derived from an intracellular receptor, wherein the nucleotide binding domain is a polydactyl zinc-finger peptide or modular portion thereof that specifically interacts with a contiguous nucleotide sequence of at least about 3 nucleotides; and

the fusion protein is a ligand activated transcriptional regulator.

34. (Amended) The vector of claim 32, wherein the viral vector is derived from a DNA virus or a retrovirus.

39. (Amended) A combination, comprising:

a fusion protein comprising a nucleotide binding domain operatively linked to a ligand binding domain derived from an intracellular receptor, wherein the nucleotide binding domain is a polydactyl zinc-finger peptide or modular portion thereof that specifically interacts with a contiguous nucleotide sequence of at least about 3 nucleotides and the fusion protein is a ligand activated transcriptional regulator; or

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Sub 6  
D  
G  
Cont  
a nucleic acid molecule comprising a sequence of nucleotides that encodes the fusion protein; and

a regulatable expression cassette that comprises at least one response element recognized by the nucleic acid binding domain of the fusion protein.

43. (Amended) A composition for regulating gene expression, comprising an effective amount of:

C7  
Sub 6  
D  
a fusion protein comprising a nucleotide binding domain operatively linked to a ligand binding domain derived from an intracellular receptor, wherein the nucleotide binding domain is a polydactyl zinc-finger peptide or modular portion thereof that specifically interacts with a contiguous nucleotide sequence of at least about 3 nucleotides and the fusion protein is a ligand activated transcriptional regulator; or

a nucleic acid molecule comprising a sequence of nucleotides that encodes the fusion protein; and

a pharmaceutically acceptable excipient.

45. (Amended) A composition for regulating gene expression comprising an effective amount of:

Sub 70  
D  
C8  
a fusion protein comprising a nucleotide binding domain operatively linked to a transcription regulating domain and a ligand binding domain derived from an intracellular receptor, wherein the nucleotide binding domain is a polydactyl zinc-finger peptide or modular portion thereof that specifically interacts with a contiguous nucleotide sequence of at least about 3 nucleotides and the fusion protein is a ligand activated transcriptional regulator; and

a pharmaceutically acceptable excipient.

REMARKS

A check for the fees for a three month extension of time accompanies this response. Any other fees that may be due in connection with filing this paper or with this application, including any excess fees for the addition of independent claims herein, may be charged to Deposit Account No. 50-1213. If a Petition for Extension of time is needed, this paper is to be considered such Petition.